What is claimed is:

1. A switching apparatus comprising:

a first port to which a first device is connected;

a second port to which a second device that exchanges a signal with the first device is connected;

a third port to which another switching apparatus is cascade-connected;

an impedance circuit that functions as a means for detecting the signal exchanged between the first and second devices,

wherein the impedance circuit provides an impedance according to a connection state of the third port, and is electrically disconnected from a signal path when the other switching apparatus is cascade-connected to the third port.

2. A switching apparatus comprising:

x first ports

to which first devices are connected;

impedance circuits;

y second ports

that are connected via the impedance circuits to the first ports,

to which second devices are connected that exchange signals with the first devices, and

to which direct-current voltages are applied from the second devices;

coupling capacitors;

x third ports

that are connected via the coupling capacitors to the first ports, and

to which first ports of another switching apparatus are connected; and

signal superimposing circuits

that vary currents flowing through the impedance circuits according to command signals from the second devices in order to feed to the first ports the command signals in a form superimposed on the direct-current voltages applied to the second ports,

wherein, as *x*-to-*y* interconnection between the first and second devices is controlled, the impedance circuits provide impedances according to connection states of the third ports.

3. A switching apparatus as claimed in claim 2,

wherein the impedance circuits provide the impedances according to voltage application states of the third ports.

4. A switching apparatus as claimed in claim 3,

wherein the impedance circuits are each a parallel resonance circuit having a resistor circuit, an inductor, and a capacitor connected in parallel with one another, the resistor circuit having a resistor connected in series with a switch circuit that opens and closes according to the voltage application state of the corresponding third port.

5. A switching apparatus as claimed in claim 4,

wherein the impedance circuits are each so designed that a resonance frequency thereof when the switch circuit is in an on state is equal to a pulse frequency of the command signals so that, when the impedance circuits are resonating, the impedance thereof is determined by the resistance of the resistor and that, when the switch circuit is in an off state, the impedance to the command signals is infinitely high.

6. A satellite antenna switching apparatus comprising:

x converter ports

to which are connected converters that perform a predetermined conversion operation on signals received via satellite antennas;

impedance circuits;

y receiver ports

that are connected via the impedance circuits to the converter ports,

to which are connected receivers that exchange signals with the converters, and

to which are applied direct-current voltages from the receivers;

coupling capacitors;

x cascade ports

that are connected via the coupling capacitors to the converter ports, and

to which are connected converter ports of another satellite antenna switching apparatus; and

signal superimposing circuits

that vary currents flowing through the impedance circuits according to command signals from the receivers in order to feed to the converter ports the command signals in a form superimposed on the direct-current voltages applied to the receiver ports,

wherein, as *x*-to-*y* interconnection between the converters and the receivers is controlled, the impedance circuits provide impedances according to connection states of the cascade ports.

7. A satellite antenna switching apparatus as claimed in claim 6,

wherein the impedance circuits provide the impedances according to voltage application states of the cascade ports.

8. A satellite antenna switching apparatus as claimed in claim 7,

wherein the impedance circuits are each a parallel resonance circuit having a resistor circuit, an inductor, and a capacitor connected in parallel with one another, the resistor circuit having a resistor connected in series with a switch circuit that opens and closes according to the voltage application state of the corresponding cascade port.

9. A satellite antenna switching apparatus as claimed in claim 8,

wherein the impedance circuits are each so designed that a resonance frequency thereof when the switch circuit is in an on state is equal to a pulse frequency of the command signals so that, when the impedance circuits are resonating, the impedance thereof is determined by the resistance of the resistor and that, when the switch circuit is in an off state, the impedance to the command signals is infinitely high.